

REMARKS

Claims 1-40 are pending in the present application. Claims 1-6, 8-11, 13-20, 23-25, 29-34, 36-38, and 40 were amended. Reconsideration of the claims is respectfully requested.

I. 35 U.S.C. § 101

The examiner has rejected claims 1-40 under 35 U.S.C. § 101 as being directed towards non-statutory subject matter. This rejection is respectfully traversed.

According to the examiner's comments, the claims have been amended to include specific recitations that the data sets are of customer information, the distributions are geographical distributions, and the algorithm for which the data sets are created is for predicting customer behavior. It is asserted that the ability to predict customer behavior is a practical application for an abstract idea. Further, the ability to train and test the programs that provide the predictions is valuable to those who must stock a retail store, for example. Therefore, the ability to create test and training data sets that better mimic the general customer population is a practical application of an abstract idea that is concrete, useful, and tangible and is therefore statutory material. It is asserted that this rejection is overcome.

II. 35 U.S.C. § 112, First Paragraph

The examiner has objected to the specification under 35 U.S.C. § 112, first paragraph, as failing to adequately teach how to make and/or use the invention in claims 1-40. It was asserted in the rejection that because a practical application for the invention was not provided, there is no teaching of how to practice an undisclosed practical application. Additionally, the examiner rejected the claims under the same reasons. This rejection is respectfully traversed.

It is noted that the claims, as amended, are directed to a practical application and that the application as filed supports these claims. It is noted that the last paragraph of the background section provides the direction of the application when it notes that

Therefore, it would be beneficial to have a method and system for selecting a data sample for testing, training and using discovery based data mining in a customer relationship marketing predictive system which takes into

consideration any geographic bias that may exist in the original customer database and/or in the selected data samples.

This, it is submitted, is what the claimed invention does; it provides a method and system for selecting a data sample for testing and training of a predictive system of user behavior. The choice of data samples is important in that it provides a biasing of the predictive system; if the sub-system taken as a sample is not representative of the whole of the data sample, errors will be introduced into the answers provided. It is therefore asserted that the claims, and therefore the specification, are directed to a practical application.

Therefore, the objection of the specification under 35 U.S.C. § 112, first paragraph has been overcome.

III. 35 U.S.C. § 102, Anticipation

Claims 1, 15, and 29 stand rejected under 35 U.S.C. § 102 as being anticipated by Menon (5,537,488). This rejection is respectfully traversed.

Representative claim 1 recites,

1. (Currently amended) A method of selecting data sets for use with a predictive algorithm of customer behavior, comprising:
 - generating a first geographical distribution of a training data set for a predictive algorithm of customer behavior, said training data set being derived from a database containing customer information;
 - generating a second geographical distribution of a testing data set for said predictive algorithm of customer behavior, said testing data set being derived from said database containing customer information;
 - comparing the first geographical distribution and the second geographical distribution to identify a discrepancy between the first geographical distribution and the second geographical distribution; and
 - modifying selection of entries in one or more of the training data set and the testing data set based on the discrepancy between the first geographical distribution and the second geographical distribution.

As amended, this claim is fairly specifically directed. Not only is this method working with customer information as its data, but it is specifically interested in the geographical distribution of the information. As noted in the application,

By testing for representative location parameters in these data sets when training predictive algorithm, a more accurate predictive algorithm may be obtained ... This is because often times geography may override other factors in customer decisions that may be modeled using demographic information.

Therefore, by making the datasets geographically congruent with each other (and with the overall customer base, e.g. see claim 9), one potential source of errors is eliminated.

Various limitations of the claims are read on claims 24 and 28 of Menon, which read,

24. A method of pattern recognition comprising:
- receiving a plurality of training input patterns of a data type from a plurality of subject classes during a training operation;
 - forming a set of categories of the training input patterns [read on the recited "generating a first distribution of a training data set"];
 - generating a category definition for each category according to training input patterns received within the category;
 - counting the number of training input patterns received for each class within each category;
 - for each category, generating a training histogram of the training input patterns received within the category, the training histogram including counts of training input patterns of each class received within the category;
 - receiving at least one test input pattern of the data type from a subject during a testing operation [read on "generating a second distribution of a testing data set"];
 - computing a correlation between a category definition and each test input pattern [read on "comparing the first distribution and the second distribution"];
 - forming a category association between each test input pattern and a category based on the correlation; and
 - forming an observation histogram to classify the subject, the observation histogram being formed from each training histogram of each category of each category association and representing counts of training input patterns received by the training subsystem during the training operation, classification of the subject being determined by a peak class of the observation histogram, the peak class representing the highest training input pattern count of the observation histogram.
28. The method of claim 27 wherein if the correlation between a training input pattern and a best match category definition vector is below a threshold, a new category is defined **[read on "modifying selection of entries in one or more of the training data set and the testing data set based on the discrepancy between the first distribution and the second distribution"]**.

It is submitted that while Menon is discussing pattern-recognition, this patent is not directed to ensuring that the geographical distribution of a test set is in line with the geographical distribution of another set of information. In fact, the undersigned agent could find no mention of geographical distributions at all in the patent. It is submitted that Menon does not meet the amended claims and does not disclose any of (a) *generating a first geographical distribution of a training data set ...* (b) *generating a second geographical*

distribution of a testing data set ... and (c) comparing the first geographical distribution and the second geographical distribution to identify a discrepancy. Thus, this rejection is overcome.

Since the remaining claims depend from claims 1, 15, and 29, the same distinctions exist as between Menon and the claimed invention in claims 1, 15, and 29 for these claims.

Therefore, the rejection of claims 1-40 under 35 U.S.C. § 102 has been overcome.

Furthermore, Menon does not teach, suggest, or give any incentive to make the needed changes to reach the presently claimed invention. Menon is directed to a more general concept of pattern recognition, while the present application is specifically directed to making the test and training datasets for a predictive algorithm be more geographically congruent with each other and with the main database. Absent the examiner pointing out some teaching or incentive to implement Menon with geographical location as a specific focus, one of ordinary skill in the art would not be led to modify Menon to reach the present invention when the reference is examined as a whole.

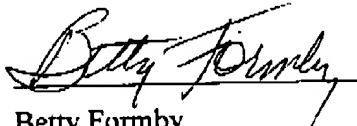
IV. Conclusion

It is respectfully urged that the subject application is patentable over Menon and is now in condition for allowance.

The examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

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Respectfully submitted,



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